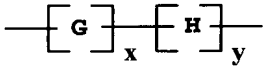
Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-28 (canceled)

29 (previously presented) A particle composition comprising monodisperse polymer beads stabilized by vinylsulfonyl-functionalized polymers, wherein said vinylsulfonyl-functionalized polymers are grafted to the external surfaces of said beads and, wherein said vinylsulfonyl-functionalized polymer is soluble in water, water-miscible solvents, or a mixture thereof, wherein said vinylsulfonyl-functionalized polymer comprises vinylsulfonyl or vinylsulfonyl precursor moieties grafted to the surface of said polymer bead, wherein said vinylsulfonyl-functionalized polymers are represented by Formula I:



Formula I

wherein

"G" represents a polymerized α,β-ethylenically unsaturated addition polymerizeable monomer;

"H" represents a vinylsulfone or vinylsulfone precursor unit monomer; and

x and y both represent molar percentages ranging from 10 to 90 and 90 to 10.

30 (original) The composition of claim 29 wherein said monodisperse polymer particles comprise a coefficient of variation in the particle diameter of less than 20%.

31 (original) The composition of claim 29 wherein said monodisperse polymer particles comprise a coefficient of variation in the particle diameter of less than 15%.

32 (original) The composition of claim 29 wherein said monodisperse polymer particles comprise a coefficient of variation in the particle diameter of less than 10%.

33 (original) The composition of claim 29 wherein said polymer bead comprises a polymer made from at least one monomer containing α,β-ethylenic unsaturation.

34 (original) The composition of claim 29 wherein polymer bead comprises a polymer made from at least one monomer comprising a monomer having limited solubility in water and wherein said polymer bead further comprises less than 10% of the total weight of the polymerizeable solids, of one or more water-soluble ethylenically unsaturated monomers

35 (canceled)

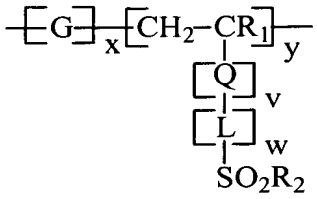
36 (canceled)

37 (previously presented) The composition of Claim 29 wherein G represents nonionic or ionic monomers.

38 (previously presented) The composition of Claim 29 wherein G represents the polymerized form of acrylamide, sodium 2-acrylamido-2-methanepropionate, sulfopropyl acrylate and methacrylate salts, or sodium styrenesulfonate.

39 (previously presented) The composition of Claim 29 wherein H represents the polymerized form of a vinylsulfone or vinylsulfone precursor unit.

40 (previously presented) The composition of Claim 29 wherein said "H" represents groups represented by Formula II:



Formula II

wherein:

R_1 is a hydrogen atom or a C_1-C_6 alkyl group;

Q is $-CO_2-$, or $CONR_1$;

v is 1 or 0;

w is 1-3;

L is a divalent linking group containing at least one linkage selected from the group consisting of $-CO_2-$ and $-CONR_1$, and containing 3-15 carbon atoms, or a divalent atom containing at least one linkage selected from the group consisting of –O-, $-N(R_1)-$, -CO-, -SO-, $-SO_2-$, $-SO_3-$, $-SO_2N(R_1)-$, $-N(R_1)CON(R_1)-$ and $-N(R_1)CO_2-$, and containing 1-12 carbon atoms in which R_1 has the same meaning as defined above; and

R_2 is -CH=CH2 or –CH2-CH2X_1 wherein X_1 is a substituent replaceable by a nucleophilic group or releasable in the form of HX_1 by a base.

41 (original) The composition of Claim 40 wherein X_1 represents $-S_2O_3^-$, $-SO_4^-$, -Cl, -Br, -I, quaternary ammonium, pyridinium, and –CN, and sulfonate esters.

42 (original) The composition of claim 29 wherein further comprising a bioaffinity tag bound to the surface of said bead.

43 (original) The composition of claim 42 wherein said bioaffinity tag comprises at least one member selected from the group consisting of nucleic acids, antibodies, proteins, polysaccharides. oligonucleotides, peptide nucleic acid (PNA), peptides, antibodies, antigens, enzymes, proteins, and synthetic molecules having biological activities

44-64 (canceled)